

CONSTRUCTION TECHNOLOGIES

A student who has completed the Job Corps Construction Technologies program is equipped with the skills to contribute to the workplace as a valued employee from day one. Competence in academic and vocational skills is required for graduation. In addition, Job Corps students learn employability and technological skills. To complete his or her Construction Technologies training, a student must master skills in these categories:

GENERAL SAFETY

Demonstrate appropriate safety precautions when performing tasks and using tools; identify safe work site procedures, including fall protection and confined spaces; demonstrate the safe and proper use of ladders and scaffolding; locate and properly operate fire safety equipment; select proper safety attire to wear on the job site including safety glasses and shoes and hardhats; demonstrate the ability to work safely with other workers on the job site, respond appropriately in an emergency situation, properly lift and carry construction materials, handle and store chemicals safely consistent with OSHA and MSDS requirements, work safely around construction vehicles.

LADDERS AND SCAFFOLDS

Select, position, raise and lower ladders safely; demonstrate safe and proper use of scaffolding.

MATH

Perform math operations using whole numbers, fractions and decimals; demonstrate the ability to lay out and make angular measurements; calculate square foot and linear measurements; compute volume as related to requirements for concrete; demonstrate the ability to square corner using the 3-4-5 method, to estimate material for projects, to accurately measure to the nearest 1/16 inch.

BLUEPRINT READING

Explain various types of drawings (plans, elevation, section, detail, etc.), orthographic projection, various blueprint symbols; read and interpret basic drawings.

CARPENTRY CONSTRUCTION

Demonstrate carpentry safety practices, the competent and safe use, maintenance and storage of carpentry-related hand and power tools; identify various anchors and fasteners and lumber and other building materials; identify, replace and repair various siding and exterior trim; repair or replace roof flashing; demonstrate the ability to properly pour, place and vibrate concrete and properly finish and edge concrete; describe concrete stamping procedures.

MASONRY

Demonstrate masonry safety practices; identify and demonstrate correct use of hand and power tools; identify the proper anchors and fasteners and masonry-related material; mix mortar to proper proportions; apply mortar; lay units to lines; tool joints; clean and maintain masonry surfaces.

PLUMBING

Demonstrate plumbing safety practices; identify and demonstrate proper safety techniques of basic plumbing hand and power tools; identify proper anchors and fasteners, common plumbing materials and fittings; demonstrate the ability to cut and join copper pipe and join cast iron pipe, patch and/or repair concrete surfaces, and repair or install common plumbing fixtures (toilets, sinks, showers, water heaters, etc.).

ELECTRICAL

Demonstrate electrical safe practices and a familiarity with the national electric code; identify and demonstrate proper safety techniques of basic electrical hand and power tools; identify anchors and fasteners, electrical-related materials; use electrical test equipment; demonstrate the ability to install fixtures and controls (switches, receptacles, lighting fixtures, etc.), to wire a basic circuit, work with low-voltage circuits; identify and describe residential and commercial voltages; demonstrate the ability to work with various raceways and conduit.

PAINTING

Demonstrate proper painting safety practices, the competent and safe use, maintenance, and storage of painting hand and power tools; identify various materials (oil, latex, stains, etc.); prepare surfaces for finish (wood, metal, drywall, etc.); demonstrate the proper application techniques of various finishes; demonstrate the proper application techniques of various finishes, the proper cleanup, storage and disposal of various painting-related materials.

DRYWALL FINISHING/PLASTERING

Demonstrate drywall/plastering safety practices; identify and demonstrate proper safety techniques of basic drywall/plastering hand and power tools; identify proper anchors and fasteners; identify common drywall/plastering materials; demonstrate proper ability to patch and repair drywall, finish new drywall, patch and repair plaster; explain various lath and plaster techniques; demonstrate the application process, repair and maintenance of synthetic stucco.

FLOOR COVERING

Demonstrate flooring safety practices; demonstrate and identify proper safety techniques of basic flooring hand and power tools; identify proper anchors and fasteners and various foreign materials; demonstrate the proper installation and maintenance of wood and vinyl flooring and carpeting.

LANDSCAPING/GROUNDSKEEPING

Demonstrate landscaping/groundskeeping safety practices; identify and demonstrate proper safety techniques of basic landscaping/groundskeeping; identify and demonstrate proper safety techniques of basic landscaping/groundskeeping hand tools; identify various landscaping/groundskeeping materials; demonstrate the ability to install and maintain shrubs and ground cover, to seed and maintain lawn areas; explain the installation and maintenance of various sprinklers/irrigation systems; demonstrate the ability to design, install, and maintain a basic landscape.

CONSTRUCTION LABORING

Demonstrate construction laboring safety practices; identify and demonstrate proper safety techniques of basic construction laboring hand and power tools; identify various construction laboring materials and equipment and their uses; explain proper traffic control techniques (cones, flagging, etc.); demonstrate proper stockpiling and expediting of materials.

SURVEYING AND LAYOUT

Demonstrate proper surveying safety materials; identify various surveying and layout instruments; demonstrate the proper installation, maintenance and care of various leveling and layout instruments, the proper techniques to shoot elevations, perform basic layouts (square, triangle, etc.); demonstrate the ability to layout slopes and grades.

RIGGING AND SIGNALING

Demonstrate the proper rigging and signaling safety procedures; explain the proper hand signals for various equipment; identify proper rigging techniques, tools and equipment.

EXCAVATION, SHORING AND BACKFILLING

Describe, identify and demonstrate proper safety techniques of basic excavation, shoring and backfilling hand tools; identify the various power tools and equipment used in excavation, shoring, and backfilling; identify the various anchors and fasteners; identify the various materials used.